

Mapping of Water Stress Areas in Central Jakarta based on Water Stress Index

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Abstract

Water stress in Central Jakarta is mainly caused by population growth and increased development, which is not related by increased public awareness to the environmental condition. This study aims to determine water stress level in Central Jakarta and provide strategic directions and policies. This study discusses water stress conditions using index related to SDG Indicator 6.4.2-Water Stress. The index consisting of indicators selected: availability of water, piped water service coverage, continuity of water resources, groundwater quality, quality of piped water, flood, land use, availability of sanitation facilities, water demand, level of education, purchasing ability of water, level of public trust. This study uses descriptive statistic to obtain the results. Calculation of indicator is weighted based on justification adjusted to the existing condition. Results of index weighting is water stress index (WSI) which can be mapped for each sub-district. WSI for Central Jakarta is 0,18-0,52, describing no water stress to very high of water stress. Kartini, Kebon Kelapa, Kemayoran are sub-districts in high index; Karang Anyar needs special attention related to its very high index. Through mapping, strategic directions and policies can be provided which are revitalize water body, increase flow of piped water, and improve quality of water resources.

Keywords

Indicators of Water Stress, Water Resources, Water Stress Index